AMENDMENTS TO THE CLAIMS

Please amend claims 9 and 11. Please add new claim 12. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Withdrawn) A method of amplifying nucleic acid encoding at least a portion of an antibody comprising:

a) annealing a primer to a template that encodes at least a portion of an antibody, the primer having a first portion which anneals to the template and a second portion of predetermined sequence which does not anneal to the template;

b) synthesizing a polynucleotide that is complementary to the portion of the template between the location at which the first portion of the primer anneals to the template and the end of the template, the polynucleotide having the primer at a first end thereof and a second end;

c) separating the polynucleotide synthesized in step (b) from the template;

d) annealing a template oligonucleotide to the second end of the polynucleotide synthesized in step (b), the template oligonucleotide having a first portion that anneals to the second end of the polynucleotide and a second portion having the same predetermined sequence as the second portion of the primer;

e) extending the polynucleotide synthesized in step (b) to provide a terminal portion thereof that is complementary to the predetermined sequence; and

f) amplifying the extended polynucleotide using a single primer having the predetermined sequence.

2. (Withdrawn) A method as in claim 1 wherein the step of annealing a primer to a template that encodes at least a portion of an antibody comprises annealing at least one primer that comprises a sequence selected from the group consisting of
CTCGAGCAGGTKCAGCTGGTGCAG, (SEQ ID NO 296),
CTCGAGCAGGTCCAGCTTGTGCAG, (SEQ ID NO 297),
CTCGAGSAGGTCCAGCTGGTACAG, (SEQ ID NO 298),
CTCGAGCARATGCAGCTGGTGCAG, (SEQ ID NO 299),

CTCGAGCAGATCACCTTGAAGGAG, (SEQ ID NO 300),
CTCGAGCAGGTCACCTTGARGGAG, (SEQ ID NO 301),
CTCGAGGARGTGCAGCTGGTGGAG, (SEQ ID NO 302),
CTCGAGCAGGTGCAGCTGGTGGAG, (SEQ ID NO 303),
CTCGAGGAGGTGCAGCTGTTGGAG, (SEQ ID NO 304),
CTCGAGCAGSTGCAGCTGCAGGAG, (SEQ ID NO 305),
CTCGAGCAGGTGCAGCTACAGCAG, (SEQ ID NO 306),
CTCGAGGARGTGCAGCTGGTGCAG, (SEQ ID NO 307),
CTCGAGCAGGTACAGCTGCAGCAG (SEQ ID NO 308) and
CTCGAGCAGGTSCAGCTGGTGCAA, (SEQ ID NO 309),

wherein R is A or G, K is G or T, and S is C or G.

3. (Withdrawn) A method as in claim 1 wherein the step of annealing a primer to a template that encodes at least a portion of an antibody comprises annealing a primer to a template that encodes at least a portion of an IgA antibody.

4. (Withdrawn) A method of amplifying nucleic acid encoding at least a portion of an antibody comprising:

a) annealing a primer and a boundary oligonucleotide to a template that encodes at least a portion of an antibody, the primer having a first portion which anneals to the template and a second portion of predetermined sequence which does not anneal to the template;

b) synthesizing a polynucleotide that is complementary to the portion of the template between the location at which the first portion of the primer anneals to the template and the portion of the template to which the boundary oligonucleotide anneals, the polynucleotide having the primer at a first end thereof and a second end;

c) separating the polynucleotide synthesized in step (b) from the template;

d) annealing a template oligonucleotide to the second end of the polynucleotide synthesized in step (b), the template oligonucleotide having a first portion that anneals to the second end of the polynucleotide and a second portion having the same predetermined sequence as the second portion of the primer;

e) extending the polynucleotide synthesized in step (b) to provide a terminal portion thereof that is complementary to the predetermined sequence;

f) amplifying the extended polynucleotide using a single primer having the predetermined sequence.

5. (Withdrawn) A method as in claim 4 wherein the step of annealing a primer to a template that encodes at least a portion of an antibody comprises annealing at least one primer that comprises a sequence selected from the group consisting of
CTCGAGCAGGTKCAGCTGGTGCAG, (SEQ ID NO 296),
CTCGAGCAGGTCCAGCTTGTGCAG, (SEQ ID NO 297),
CTCGAGSAGGTCCAGCTGGTACAG, (SEQ ID NO 298),
CTCGAGCARATGCAGCTGGTGCAG, (SEQ ID NO 299),
CTCGAGCAGATCACCTTGAAGGAG, (SEQ ID NO 300),
CTCGAGCAGGTCACCTTGARGGAG, (SEQ ID NO 301),
CTCGAGGARGTGCAGCTGGTGGAG, (SEQ ID NO 302),
CTCGAGCAGGTGCAGCTGGTGGAG, (SEQ ID NO 303),
CTCGAGGAGGTGCAGCTGTTGGAG, (SEQ ID NO 304),
CTCGAGCAGSTGCAGCTGCAGGAG, (SEQ ID NO 305),
CTCGAGCAGGTGCAGCTACAGCAG, (SEQ ID NO 306),
CTCGAGGARGTGCAGCTGGTGCAG, (SEQ ID NO 307),
CTCGAGCAGGTACAGCTGCAGCAG (SEQ ID NO 308) and
CTCGAGCAGGTSCAGCTGGTGCAA, (SEQ ID NO 309),

wherein R is A or G, K is G or T, and S is C or G.

6. (Withdrawn) A method as in claim 4 wherein the step of annealing a primer to a template that encodes at least a portion of an antibody comprises annealing a primer to a template that encodes at least a portion of an IgA antibody.

7. (Withdrawn) A method of producing an antibody library comprising:

a) providing a diverse population of templates that encode at least a portion of an IgA antibody;

b) contacting the diverse population of templates with at least one primer, the at least one primer having a first portion which anneals to the templates and a second portion of predetermined sequence which does not anneal to the templates;

c) synthesizing polynucleotides that are complementary to the portion of the templates between the location at which the first portion of the primer anneals to the template and the end of the templates, the polynucleotides having the primer at a first end thereof and a second end;

d) separating the polynucleotides synthesized in step (c) from the templates;

e) annealing at least one template oligonucleotide to the second end of the polynucleotides synthesized in step (c), the at least one template oligonucleotide having a first portion that anneals to the second end of the polynucleotides and a second portion having the same predetermined sequence as the second portion of the primer;

f) extending the polynucleotides synthesized in step (c) to provide a terminal portion thereof that is complementary to the predetermined sequence; and

g) amplifying the extended polynucleotides using a single primer having the predetermined sequence.

8. (Withdrawn) A method as in claim 7 wherein the step of annealing a primer to a template that encodes at least a portion of an antibody comprises annealing at least one primer that comprises a sequence selected from the group consisting of
CTCGAGCAGGTKCAGCTGGTGCAG, (SEQ ID NO 296),
CTCGAGCAGGTCCAGCTTGTGCAG, (SEQ ID NO 297),
CTCGAGSAGGTCCAGCTGGTACAG, (SEQ ID NO 298),
CTCGAGCARATGCAGCTGGTGCAG, (SEQ ID NO 299),
CTCGAGCAGATCACCTTGAAGGAG, (SEQ ID NO 300),
CTCGAGCAGGTCACCTTGARGGAG, (SEQ ID NO 301),
CTCGAGGARGTGCAGCTGGTGGAG, (SEQ ID NO 302),
CTCGAGCAGGTGCAGCTGGTGGAG, (SEQ ID NO 303),
CTCGAGGAGGTGCAGCTGTTGGAG, (SEQ ID NO 304),
CTCGAGCAGSTGCAGCTGCAGGAG, (SEQ ID NO 305),
CTCGAGCAGGTGCAGCTACAGCAG, (SEQ ID NO 306),

CTCGAGGARGTGCAGCTGGTGCAG, (SEQ ID NO 307),
CTCGAGCAGGTACAGCTGCAGCAG (SEQ ID NO 308) and
CTCGAGCAGGTSCAGCTGGTGCAA, (SEQ ID NO 309),

wherein R is A or G, K is G or T, and S is C or G.

9. (Currently amended) A library of IgA antibodies prepared in accordance with ~~the~~ a method ~~of claim 7~~, said method comprising:

a) providing a diverse population of templates that encode at least a portion of an IgA antibody;

b) contacting the diverse population of templates with at least one primer, the at least one primer having a first portion which anneals to the templates and a second portion of predetermined sequence which does not anneal to the templates;

c) synthesizing polynucleotides that are complementary to the portion of the templates between the location at which the first portion of the primer anneals to the template and the end of the templates, each of the polynucleotides having a primer at a first end thereof and a second end;

d) separating the polynucleotides synthesized in step (c) from the templates;

e) annealing at least one template oligonucleotide to the second end of the polynucleotides synthesized in step (c), the at least one template oligonucleotide having a first portion that anneals to the second end of the polynucleotides and a second portion having the same predetermined sequence as the second portion of the primer;

f) extending the polynucleotides synthesized in step (c) to provide a terminal portion thereof that is complementary to the predetermined sequence; and

g) amplifying the extended polynucleotides using a single primer having the predetermined sequence.

10. (Withdrawn) A method of identifying an antibody having a desired binding specificity comprising:

preparing a library of IgA antibodies in accordance with the method of claim 7; and

screening the library to identify one or more IgA antibodies having a desired binding specificity.

11. (Currently amended) An IgA antibody having a desired binding specificity identified in accordance with ~~the~~ a method ~~of claim 10~~, said method comprising:

preparing a library of IgA antibodies of claim 9; and

screening the library to identify one or more IgA antibodies having a desired binding specificity.

12. (New) The library of IgA antibodies of claim 9, wherein the step of annealing a primer to a template that encodes at least a portion of an antibody comprises annealing at least one primer that comprises a sequence selected from the group consisting of:
CTCGAGCAGGTKCAGCTGGTGCAG, (SEQ ID NO 296),
CTCGAGCAGGTCCAGCTTGTGCAG, (SEQ ID NO 297),
CTCGAGSAGGTCCAGCTGGTACAG, (SEQ ID NO 298),
CTCGAGCARATGCAGCTGGTGCAG, (SEQ ID NO 299),
CTCGAGCAGATCACCTTGAAGGAG, (SEQ ID NO 300),
CTCGAGCAGGTCACCTTGARGGAG, (SEQ ID NO 301),
CTCGAGGARGTGCAGCTGGTGGAG, (SEQ ID NO 302),
CTCGAGCAGGTGCAGCTGGTGGAG, (SEQ ID NO 303),
CTCGAGGAGGTGCAGCTGTTGGAG, (SEQ ID NO 304),
CTCGAGCAGSTGCAGCTGCAGGAG, (SEQ ID NO 305),
CTCGAGCAGGTGCAGCTACAGCAG, (SEQ ID NO 306),
CTCGAGGARGTGCAGCTGGTGCAG, (SEQ ID NO 307),
CTCGAGCAGGTACAGCTGCAGCAG (SEQ ID NO 308) and
CTCGAGCAGGTSCAGCTGGTGCAA, (SEQ ID NO 309),

wherein R is A or G, K is G or T, and S is C or G.